

# Claims

- [c1] 1. A system for the construction of life size play structures comprises a multiplicity of inflatable blocks, wherein each block further comprises:
- (a) an identical top polygonal surface and bottom polygonal surface, each surface comprising a multiplicity of surface seams at the periphery of the surface and each surface seam comprising two ends;
  - (b) a multiplicity of side panels, each joining an the top surface seam with the corresponding bottom surface seam, each side panel having two ends, an each side panel affixed to an adjacent side panel by means of a side panel seam;
  - (c) A multiplicity of strap connectors and a multiplicity of flap connectors, whereby two or more connectors are affixed in proximity to each seam of the top surface, and whereby two or more connectors are affixed in proximity to each seam of the bottom surface, whereby strap connectors and flap connectors are alternated about the seams on each surface, so that each strap connector comprises a strap which affixes to a slit in a corresponding flap connector on another block.

- [c2] 2. The system of claim 1, whereby an end connector has a center line which is located at a distance of approximately DC from the nearest seam end, where DC is defined by
- $$DC = l/(2n)$$
- where l is the length of the seam, and n is the number of connectors on the seam,  
and wherein each connector on each surface seam has a center line located at a distance of 2\*DC from the nearest other connector on the same surface seam.
- [c3] 3. The system of claim 2, wherein each flap connector on the upper surface is adjacent to a flap connector on the lower surface, and whereby each strap connector on the upper surface is adjacent to a strap connector on the lower surface.
- [c4] 4. The system of claim 3, wherein each strap connector comprises a cruciate mount comprising a horizontal area, an upper vertical area and a lower vertical area, wherein a portion of male hook-and-loop material is affixed to the upper vertical area, and a portion of female hook-and-loop material is affixed to the lower vertical area, and whereby the horizontal area is affixed to an oval mount.

[c5] 5. The system of claim 4, wherein each flap connector has formed within it two or more slits, each approximately 125% of the width of the vertical area of a corresponding strap connector, and wherein each flap connector further comprises a mounting area in proximity to a bottom edge of the flap connector, and which is affixed to a corresponding oval mount.

[c6] 6. The system of claim 5, wherein each slit of each flap connector has needle eyes terminating each end.

[c7] 7. The system of claim 6, wherein for each flap connector the slits are disposed parallel to each other, and wherein the distance between each slit and an adjacent slit is equal to the distance between an uppermost slit and an upper edge of the flap connector, and is further equal to the distance between each needle eye and the closest point on an edge of the flap connector.

[c8] 8. The system of claim 7, wherein for each flap the distance of the first slit from any edge of the vinyl flap will be approximately equal to the separation between the first and the second slits of the flap.

[c9] 9. The system of claim 8, wherein the distance between the second slit and the base of the flap are such that:  
(a) when placing a first block and a second block side by

side, with the side panels touching, so that each strap will face a corresponding flap; and

(b) With the side panels of each block touching, but not squeezed together with any force, and a fully extended, each flap is approximately  $\frac{1}{2}$  inch away from the baseline of the corresponding strap,

then the following equations will approximately hold for a particular strap and flap:

(c)  $D = A + B1 + B2 + C$

(d)  $F = D - E$

where:

(e) A is the distance between the flap base and a corresponding seam;

(f) B1 is the bulge of the first block;

(g) B2 is the bulge of the second block;

(h) C is the distance between the strap base and the corresponding seam line;

(i) D is the total distance between the base of the flap and the base of the strap;

(j) E is the distance between a tip of the flap and the strap base; and

(k) F is the flap length

10. The system of claim 9, wherein the affixing of each connector to the corresponding oval mount is done by heat sealing, and wherein the affixing of each oval connector mount to the corresponding block is done by heat

sealing.

- [c10] 11. The system of claim 10, wherein the blocks, flaps, and cruciate mounts are fabricated from polyvinylchloride.